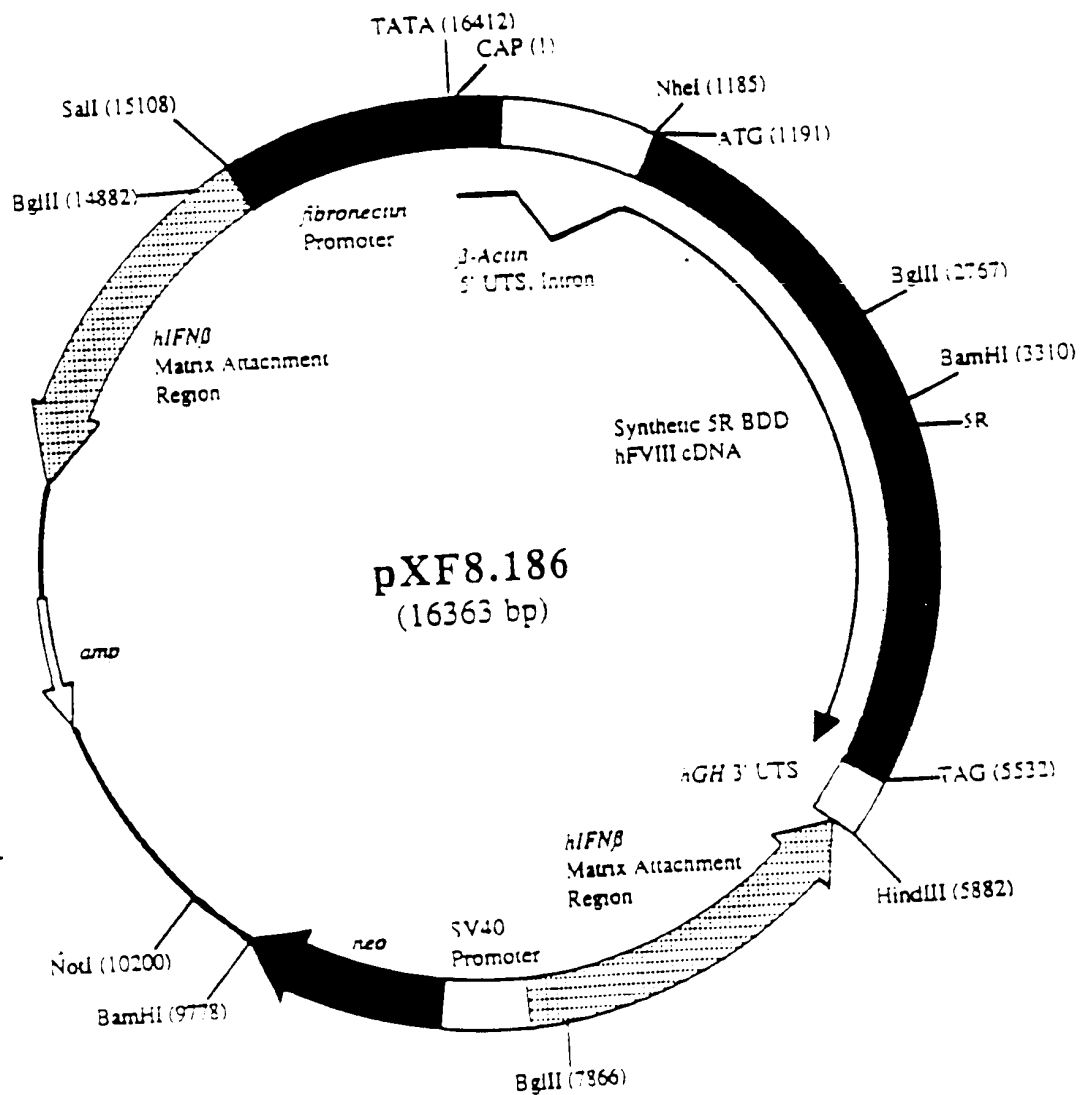


FIG. 2



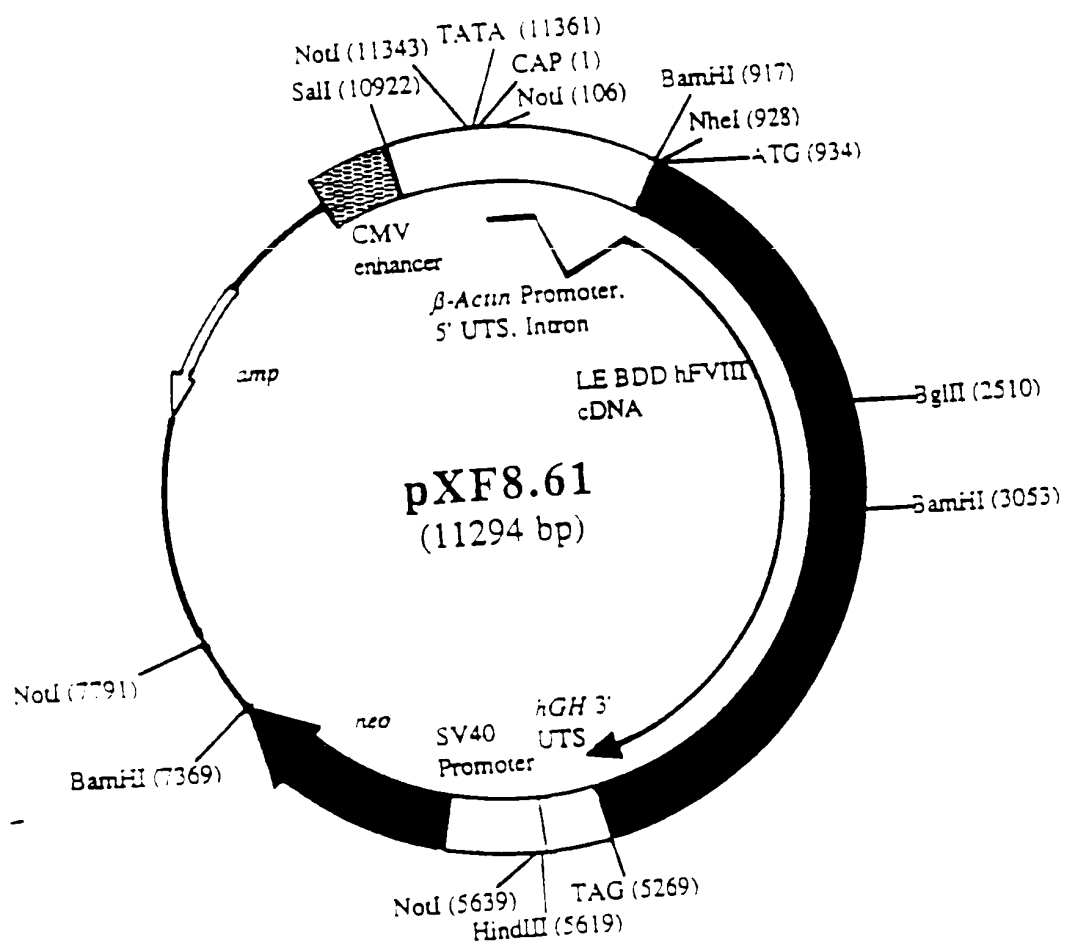


FIG. 4

Fragment A

[illegible]

FIG. 5 (1 of 14)

Fragment B

EcoRI ApaI AM1 B1 I
 GTAGAATTCTGTAAGGGGCCCCACCAATCCAGGCCGAGGTAGACACCGTGTGATCACCCTGAAGACATGGCCAG
 CATCTTAAGCATCCCCGGGGTGTAGGTCCGGCTCCACATGTGTGGACACCACTTAGTGGACTTCTTGTACCGGTG
 AM1 Br3 3' OH 5' P
 CCACCCCGTGAGC TGTGACGCCGTTGGCGGTGAGCTACTG GAAGCCAGGCGAGGCGCCGAGTAGACGACGACA
 GGTGGGGCACTCG GACGTGCTTATTTGCACTCGATGAC CTTCGGGTGCTGCCCCGCTCATTCCTTGTGATCTP
 5' P 3' OH
 AM1 B12 3' OH 5' P
 CCAGCCAGCGCGAGAAGAGGACGACAAGGTGTTCCCCGG TCGGACGACACCTAAGTGTGGCAGTG CTGAAG
 GGTCGGTCCGGCTCTTCTCTCTGCTGTTCACACAGGGGGCG GCCGTGGTGTGATGACACCGGTCCAC GACTTTC
 5' P 3' OH
 AM1 B13 PmII HindIII
 GAGAACGGCCCCCATGGCCAGCGACCCCCCTGTGCTTGAACCTACGTAAGTACCTGAGCCACGTGCTACAAAGCTTTAC
 CTCTTTGGCCGGGTACCGCGGTGCTGGAGACACGGAAGCTGATGTGATGACTCGGTGACGATGTTGGAATG
 AM1 Br1

FIG. 5 (2 of 14)

Fragment C

EcoRI PmlI AM1 Cl 1
 GTAGATTGTAAGCCAGTGGACCTGGTGAAGACCTGAACAGCGGCTGATCGGCGGCTGCTGGTGTGCGCGAGGGCAGCCTG
 CATCTTAAAGCATCGGTGCACCTGACCACTTCTGTGACTTGTGCGGACTAGCCCGGAGACACACACAGCGCGCTTCTCTGAGAC

3' OH 5' P
 GCCAAGAGAGAGAC TCAGACCCCTGCACAGTTTCATC CTGCTGTGCGCGTGTGACGAGGCAAGAGCCTGCCACAGCGAGACC
 CGCTTCTCTTCTG GGTCTGGGACCGTGTTCAGTAG GACGACAAAGCGGACAAAGCTTCTCTCTGACCGGTGCTGCTTGA

5' P 3' OH AM1 Cr2

3' OH 5' P
 AAGACAGCCTGATGCAGGACCGGACCGCGCCAGCGCC TCGCCCTGGCCCAAGATGCACAC CGTGAACGGCTACGTGAACCGC
 TTCTTGTGGACTACGTCTGCGCGCTGCGGCGGTGCGGCTGCTACCTGTG GCACTTGGCCGATGCACCTTGGCG

5' P 3' OH

PmlI HindIII
 AM1 Cl 3
 AGCCTGCCCTGCGCTGATCGGCTGCCACCGCAAGAGCGTGTACTGGCACGTCCTACAAAGCTTTAC
 TCGGACGGAGGACTAGCCGACGCTGCTTCTTCTCGCACATGACCGTGCACGATGTTTGAATG

AM1 Cr1

Fragment D

EcoRI PmlI AM1D11
 GTAGAATTCGTAGCAGCATGGGCACACCCCGAGTGACACAGCATCTTCTGTGAGGGCCACAC_CTTCTGTGTGGCAACCACCG
 CATCTTAAGCATCGTGCACTAGCCGTACCCGTTGTGGGGCTCCACAGTGTCTTAGAATGACCTCTCCGGTGTG GAAGAACCAACGGCTTGTGTGC
 AM1D14 5' P 3' O11

3' OH 5' P
 CAGAGG CAGCCTGGAGATCAGCCCCATCACCTTCTTGACCGCCAGACCCTGCTGATGAGCACTGGGCCAGTTCTGCTGTTCTGACACATCA
 GATGCCGCTGCTGACTCTAGTCGGGGTAGTGGAGAGCACTGCGGGCTCTGGAGCAGCTACCTGATGATCTGCTTCAAGACGACAA GACGGTGTAGT
 AMID13 AMID12
 AMID13 5' P 3' OH

3' OH 5' P
GAGGCACACAGAC¹ GAGCGATGAGGCC¹ TACTGTGAGGTGACAGCTGCCCCGAGAGGCC¹ CAGCTGGCGATGAGACACAGAGAGG¹ TCC
CTTCGGGTGTGTGTG¹ CTGGCGTACTCCGGATGCAC¹ TCCACCTGTGACGGGGCTCTCCGGCTTGACGCGTACTTCTGTGTCTCTTC¹ GCG
AM1D12 5' P 3' OH

3' OH 5' P
 GAGACTAGCAGCAGCAGCTGAC¹ EGACAGCGCAGATGACCTGGTGGCTTGACGAGCAGCAGACAGCCCCAGCTTCATCCAGATCTACGGAT
 CTCTCTGATGCTGCTGCTGCTGACTG₂ GCTGTGGCTTTTACCTGCACCCACCGGAGCTGCTGCTTTTGTCTGGGGTGGAGTGGTCTTACAGATGGCTTA
 AM1D14 BglII BamHI
 AM1D1

HindIII
CCTACAGCTTAC
CGATGTTGGAAATG

Fragment E

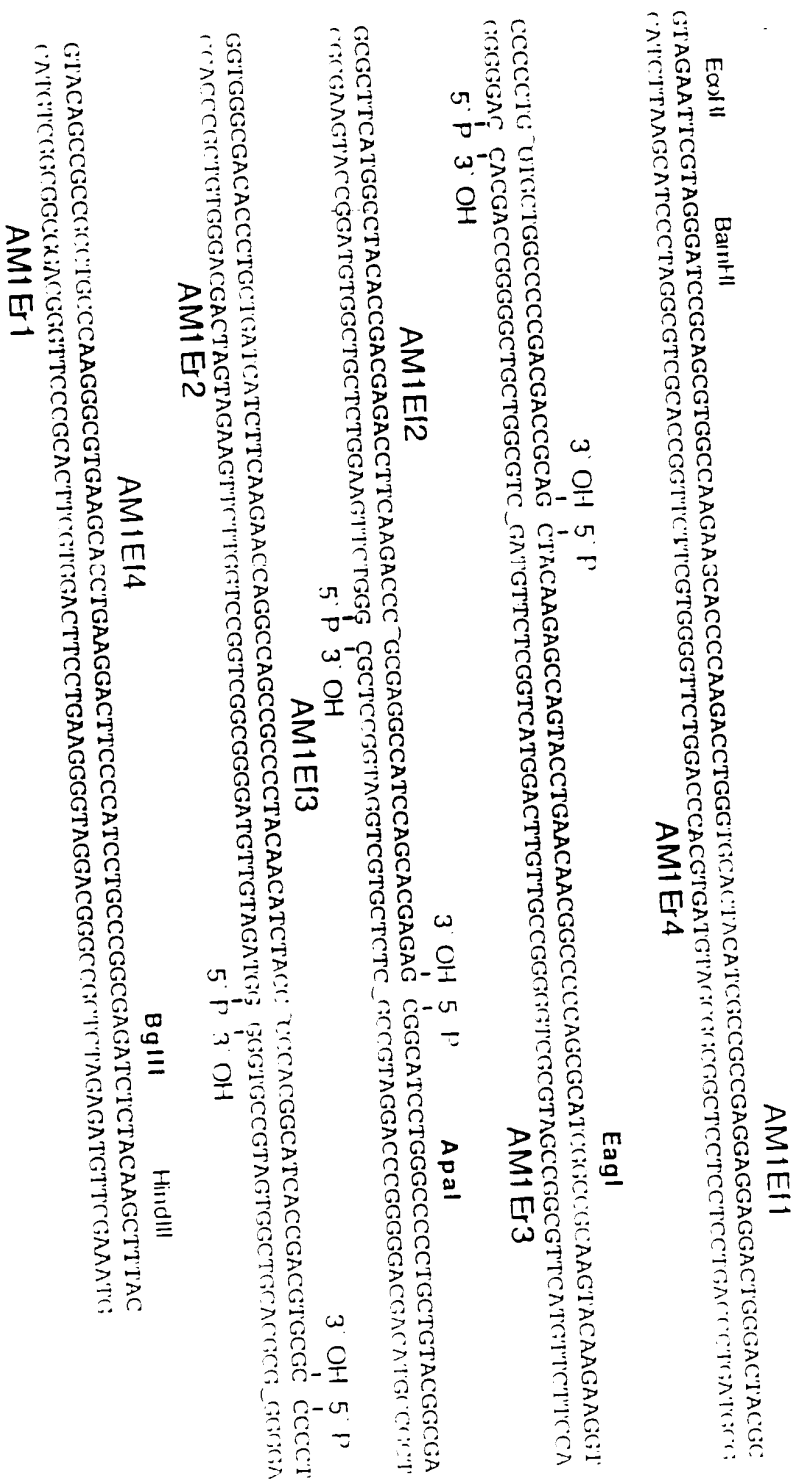


FIG. 5 (5 of 14)

AM1F11

HindIII KpnI AM1 F11
 GTTAAGCTTGTAGGCTACGAGCTGGGTTTGTGACACGCTGACAGGATCAGCTTGC TCGTTGTGGTCATGATCTGGTTGCC
 TTAATTTCGACATCCCATGCTGTCGACGCCAAGCAGCTTGTGCACTTGTCTCTAGTCTAACG TGAACGCGAGTACTAGACCAACGAT
 AM1 F13 AM1 F12
 5' P 3' OH

AM1 Fr3

AM1F12

3:01 PM

OH 5' P
 1
 5' C G C T G G T C C A C G C T T C C T T G A G A G A T C A G C A G G G G C C A T C A G C G C G C T G G C C A G G T C C G C C T C C A T G T T C A C T G A A C C T G
 3' G C G T G G T C C A C G C T T C C T T G A G A G A T C A G C A G G G G C C A T C A G C G C G C T G G C C A G G T C C G C C T C C A T G T T C A C T G A A C C T G
 C G C G A C C A C A G G T G C G A G A G A G M A C A T C G T T A T C G T C C C C G G C T A G T C C G G C G A C C G T T C A G C G A G A G T A C A A G T G C T T C G A C
 AM1 F12
 AM1 F12
 5' P 3' OH

AM1Fr2

AM1F13

B9111

3-OH-5-P

3 OH 5' P

CTGTAGTAGCGGTCAG¹ GCAGCGGGTCCCTTTGGGGCCTCTCCACGGTCACGGTCACCTTGTAAGATCTCTAAC
GACTCATTCGCCCAAGTC₂CGTGGCCCCCNACAGAACACACCCTCCGGCAGAGGTGCACATTCTACGTGAACATGAACCTTCCTAGAAATAT

AM1 Fr1

AM1Fr1

Eqn

CGAATTCCTAC
CTTACGATG

FIG. 5 (6 of 14)

Fragment G

EcoRI KpnI
 GTAGAAATTCGTAGGGTACTGACCGAGACATCCAGCGCTTCTCCCAACCCCGCGCGGTGCAGCTGGAGAGACCCCGAGTTCCAGGCCAG
 CATCTTAAGCATCCCATGGACTGGCTTCCTTTAGAGATCCGGAAGAACCGGGTTGGGGCGCGCAAGTTCGACCTCTCTGGGGCTTAACTTCGGCTC
 AM1G13
 3' OH 5' P
 CAACATCATGACAGCATCAACGGCTAC GTGTTCGACAGCCTGCAGCTGAGCGTGTGCTGCACAGAGTGGCCCTACTGGTACATCTCTGAG
 GTTGTATGTACGTGTGTAGTTGCCGATGCTACAGCTGTTCGACGTGACTCCACACGCAATGTGTTCCACCGGATGACCATGTAGGACTC
 5' P 3' OH
 CATCGGGCGCCAGACCGACTTCTGAGCGTGTCTTTCAGC TGGCTACACCTTCAAGCACAAGATG GTGTACGAGAGACACCCCTGACCTGT
 CTAGCCCTCGGGTCTGGCTGAAGACTCGCAGCATGAGTCTG TCCGATGTGAAGTTCTGTCTTAC CACATGCTCTCTGTGGGACTTGGGAC
 5' P 3' OH
 AM1G11
 BamHI HindIII
 AM1G13
 CCCCCTCAGCGGAGAGACCGGTGTATGAGCAATGAGAACCCCGCGCTGTGATCCCTTACAGCTTTAC
 GAGGAAATTCGCGCTCTGGCACAAGTACTGTACTCTCTTGGGGCCGGACACCTTAGGATGTCTTGGAAATG
 AM1G11
 AM1G12
 AM1G12

FIG. 5 (7 of 14)

Fragment H

[illegible]

FIG. 5 (8 of 14)

Fragment 1

EcoRI PstI
 CTAGAAATTCGTAGCAGCGTGTGCGCAACCGCGCCCAAGATCGCAAGCGTGGCCCAAGTTCAGAAGGTGTGTCAGAGATTCAACCGAGCGGACGCTTACCCAC
 CATCTTAAAGCATGTGTGACGACGCGCGTTGGCGCGGTCTGTGTGTCGACGCGGGTCAAGTCTTCCACCACATAGGTCTCAGTGGCTGCGGTG 5' P 3' OH

3' OH 5' P
 CCCCCTGTACCGGC GCGGAGCTGAACGAGCACCCTGGGCTTCTGCGCCCTTACATCCGCGCGAGGTGAGACGACATCATGTGTGACCGGTGACGAGGTGCTG
 GAGGATCATGCGG CCGCTGTACCTTCTCTGTGGAACCGGATGTAGCGCGGCTCCACCTCTCTTTTATGATACCACTGGCACTGGCTCTCAAGT 5' P

AM11r3 AM11l2 AM11l3
 Apat AM11l2 BstEII
 CTGTCTTCACGATCTTTCGAC GAGACCAAGAGCTGTGATCTTCACCGAGACATGAGCGCACTGCGCGCGCCCTGCAACATCCAGATGAGGAGACCTG
 GATATATAGCTGTAGATGCTG CTCTGTCTTCGACCATATTAAGTGGCTCTTGTACCTCGCGTTGACCTGATCTGCTGAGGAGCGTTGTAGCTCTTACTTCTCTG 5' P 3' OH

3' OH 5' P
 CTGTCTTCACGATCTTTCGAC GAGACCAAGAGCTGTGATCTTCACCGAGACATGAGCGCACTGCGCGCGCCCTGCAACATCCAGATGAGGAGACCTG
 GATATATAGCTGTAGATGCTG CTCTGTCTTCGACCATATTAAGTGGCTCTTGTACCTCGCGTTGACCTGATCTGCTGAGGAGCGTTGTAGCTCTTACTTCTCTG 5' P 3' OH

AM11l2 AM11l4 KpnI
 TTTCAAGGAGACTTACCGCTTTCACG CCAATCAAGCGCTACATCATGACACCCCTGCGCGCGCTGTGATGCGCCAGAGACCAAGCGCATCCGCTGTACCCCTAC
 ATCTTCTCTTGTGATGCGGAGGTGC GGTAGTTCCGATTCATGTAACCTGTGGACGGGCGCGGACCACTACTATGATCTGCTGTGCGGTAGGCGGACCATTTGGAT

GCTTTAC
 CGAATATG

FIG. 5 (9 of 14)

Fragment J

AMI J11
 EcoRI **Bst**II
 GAGAAATTCGTAGGGTACCTTCGCAACCAAGGCCAGCCGCCCTACAGCTTCTACAGCAGCAGCCTGATCAGCTACGAGGAGGACCAGCCG
 CTATCTTAAGCATCCCACTGGAAGGCGTTGTCTCCGGTCCGGCGGGATGTGGAAGATGTCTGGAGCTAGTCGATGCTCTCTCTGCTCCGCG
 3' OH 5' P
 AGGTTCCCTGAGCCCCCGCAAGACTTC GCGAAGCCCCAAGCAGACCAAGACCTTACTCTGGAAGGTGCAGCACCACATAGCCCCCACCAG
 TCC GCGGCGCTCGGGCGCTCTTGAAAGCTACCTTCGGGTCTCTGTTCTGTGATGAAAGACCTTCTCCACGTCGTGCTGTACCTGAGGCTGGT
 5' P 3' OH
AMI J12
 3' OH 5' P
 GAGCAGATTCGACTGCAAGGCCCTGGGCTTACTTCAGCTGCAGCTGCAAGGAGCTGCACAGCGGCTGATCGGCCCCCTGCTG
 CCTGCTCAAGCTGACGTTCCCGAGCCCGGATGTAAGTCTGCTGACCTGCAAGAGAGCTGCACACAGCGGCTGATCGGCGGAGAGAG
 5' P 3' OH
AMI J13
 EagI **Bst**II **Hind**III
 GTGTGCTACACCAACACACCCCTGAACCCCGCCACAGCGCGCGCCAGTGACCTACCAAGCTTTAC
 CTATACGGTGTGTGTGGGACTTGGGGCGGATGCCGGCGGTCCACTGGGATGTTGAAATTC
AMI J14

FIG. 5 (10 of 14)

EcoRI KpnI AMIK11 PmlI
 GTAGAAATTCGTAGGGTACCTGCTGAGCATGACAGCAACAGAGACATCCACAGCATCCACTTCAGCGGGCAGCGTGTTCACCTTCGGCAAGAA
 GATCTTTAAGCATCCCATGACGACACTTCCTACGCTTCGCTGCTCTTGTAGGTGTGCTAGTGTATGATGCGCCGGTGACAAAGCTTCTGCTGCTTCTTCTT

3' OH 5' P
 GCGAG TGAATACAGATGGCCCTGTACAC CTGTACCCCGCGTGTGAGAGCCGTGAG:ATGCTGGCCAGCAGAGCCCGGATCTGGCGGT
 GAGTGT GCTATCTTCTACCGGAGACATGTTTG TTAGATGGGCGCCGACAGACTCTGGCAGCTTTATGAGGTGTTCGCGCCGTACAGCTTCTTCA
 5' P 3' OH
 3' OH 5' P
 AM1K12

5' P 3' OH
 GGAGTGCCTGATCGGCGAGACCTGCACGCCCGCATGAG TAACCTGTTCCTGTGTACAG CAACAAGTGCACAGCCCCCTGGGCATGAC
 CTTCTACGACTAGCCGCTCGTGGACGTCGTCTGTACTG GTGGACAAAGACCACTATGTC GTTGTTCAAGGTCTGGGGAGACCCGTCATCG

AM1K13 **Apal** **HindIII**
 CACGCGGCTACCACTCTGACCTTCAGATCACTGCGCAGCGGCAGTACGGCCAGTGGGCGCTTACAGGCTTTAC
 CTTCTCTCTTTGACAGAGCTGAAAGTCTATTCTCTGCGCCGGTCAATGCGGTCACCGGAGATTTTGGAAATTC

FIG. 5 (11 of 14)

Fragment L

EcoRI ApaI AMILH
 GTAGATTCGTAGGGGGCCCCAAGCTGGCCGACCTGCACCTACAGCGGCAGCATCAAGCCCTGAGACCAAGAGCCCTTCAGCTGATCAAG
 CATCTTAAGCATCCCGGGGGTTCGACCTGACCTGACGTGATGTCGCCGTCGTAGTTGGCTACCTGCTGTTCTCGGGAGCTTCATCTTACTTC
 AMILH3
 3' OH 5' P
 GTGGAC TTTGTTGGCCCCCATGATCATC CACGSCATCAAGACCCAGGGCGCCCGCAGAACTTCAGACACTTGTACATCAGCCAGTTCAACA
 CACCTT3' GACGACCCGGGGGCTACTAGTAG GTGGCTGTA GTTCTGGGTCCCGCTGGTGGCTTTCAAGTCGTCGACATGTAGTCGATCAAGTACT
 5' P 3' OH
 3' OH 5' P
 TCAATGTACAGCCTGGACGGCAAGAGTG TCAACACCTACCCCGGCAACAGCAC CGGCACCCCTGATGGTGTCTTCGGCAACGTGACAGCAG
 AATTACATGTCTGACCTGCCGTTCTTCAAG GTCTGATGAGCGCCGTTGTCTG GCGGTGCTAT TACCACAGAAAGCCGTTCACCTGTCTGTC
 5' P 3' OH
 AMILH3 SmaI HindIII
 GGGCATCAAGACACACATCTTCAACCCCGCCCGGCTACAGCTTAC
 GCGGCTGTCTGTGTAGAGTTGGGGGATTC CGATGTTGMAATG
 AMILH1

FIG. 5 (12 of 14)

[illegible]

•

Fragment N

EcoRI		BstEII		AM1N1	
GTAGATTGTTAGGGTGACCGCGTGACCA	CGGGCGGTGAAGACCTGCTGACCA	GTATGATGTAAGAGAGTTCTGATCAGCAGCAGGACG	AGATG		
CACTCTTAAGCATCCCACTGGTGGAC	TGGTGGGTCCTGACTTCTCGACGAC	CTGGTCTGATGCTGCTGGTCTGG		5'	
		AM1N1r3			
3' OH 5' P		AM1N1r2			
CCAGTGGACCCCTGTTCTTC	CAAGACGGCAAGGTGAAGGTGTTCCAGGGCA	ACAGACAGCTTCACCCCGCTGGTGAACAGCC	CTGGACCCCGCTG		
GGTTCACCTGGGACAAAGAG	GTTCTTGGCCGTTCCACITCCACAAAGTCCCGGTTGGT	CGAAGTGGGGCACCACTTGTGAGACCTGGGGGGG	GGGAGT	5' P	
		AM1N1r2			
3' OH 5' P		AM1N1r3			
CCGCTACCTGGCGCATCCACC	CCAGAGCTGGGTGCACCAATCGCCCTGCGCA	TGGAGGTGCTGGGCTGGAGGGCCAGACCTGTACT	AGCTGCCCCG		
GGTCTATGACCGGTAGGTGG	GGTCTCGACCCATGTTATCTTAGCGGGAC	CGCTACCTCCAGACCTTACGCTTCCGGTCTGGAC	ATGATGATGATG		
		AM1N1r1			
HindIII					
CAAGCTTTAC					
GTTCGAATG					

FIG. 5 (14 of 14)

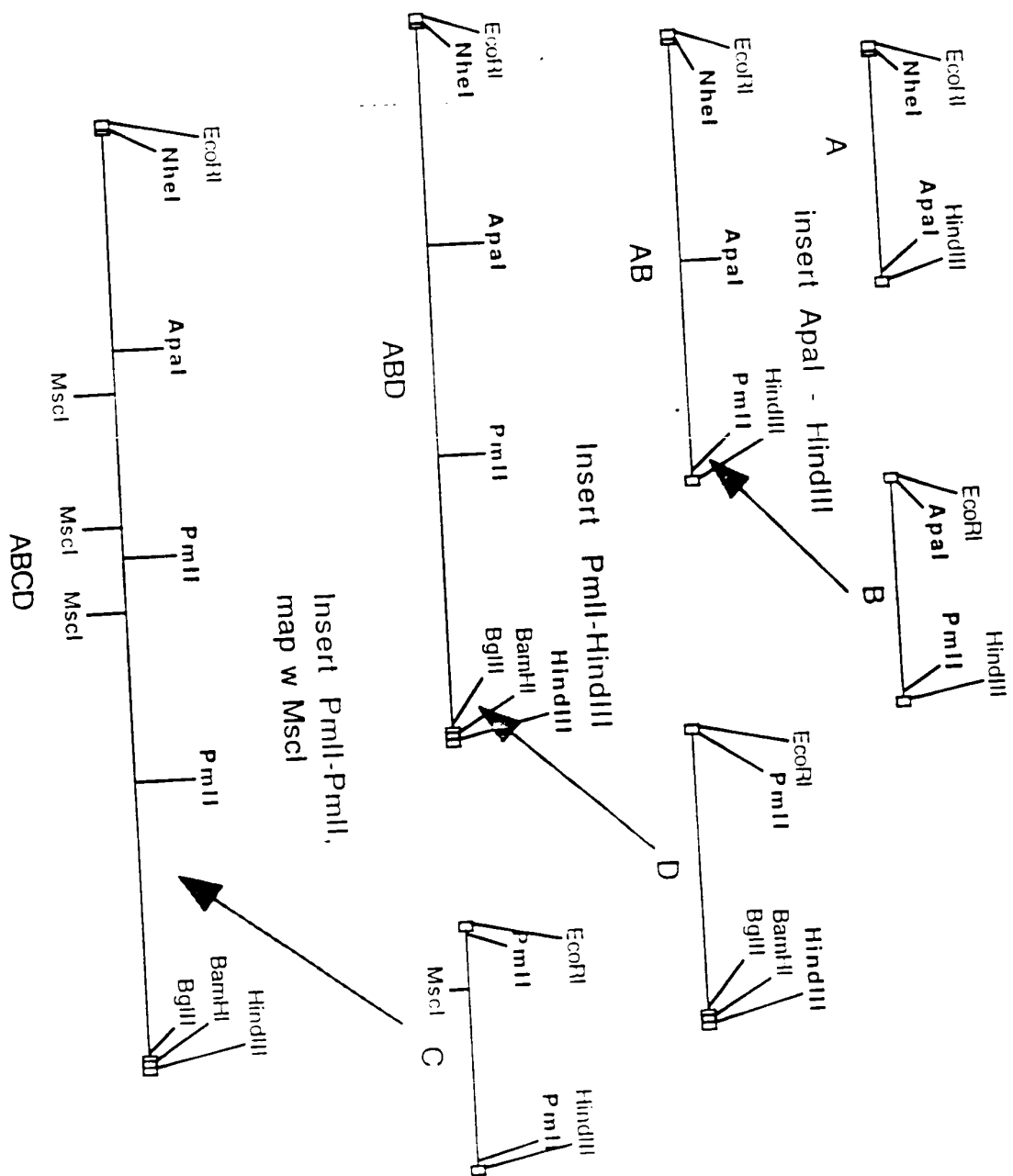


FIG. 6 (1 of 5)

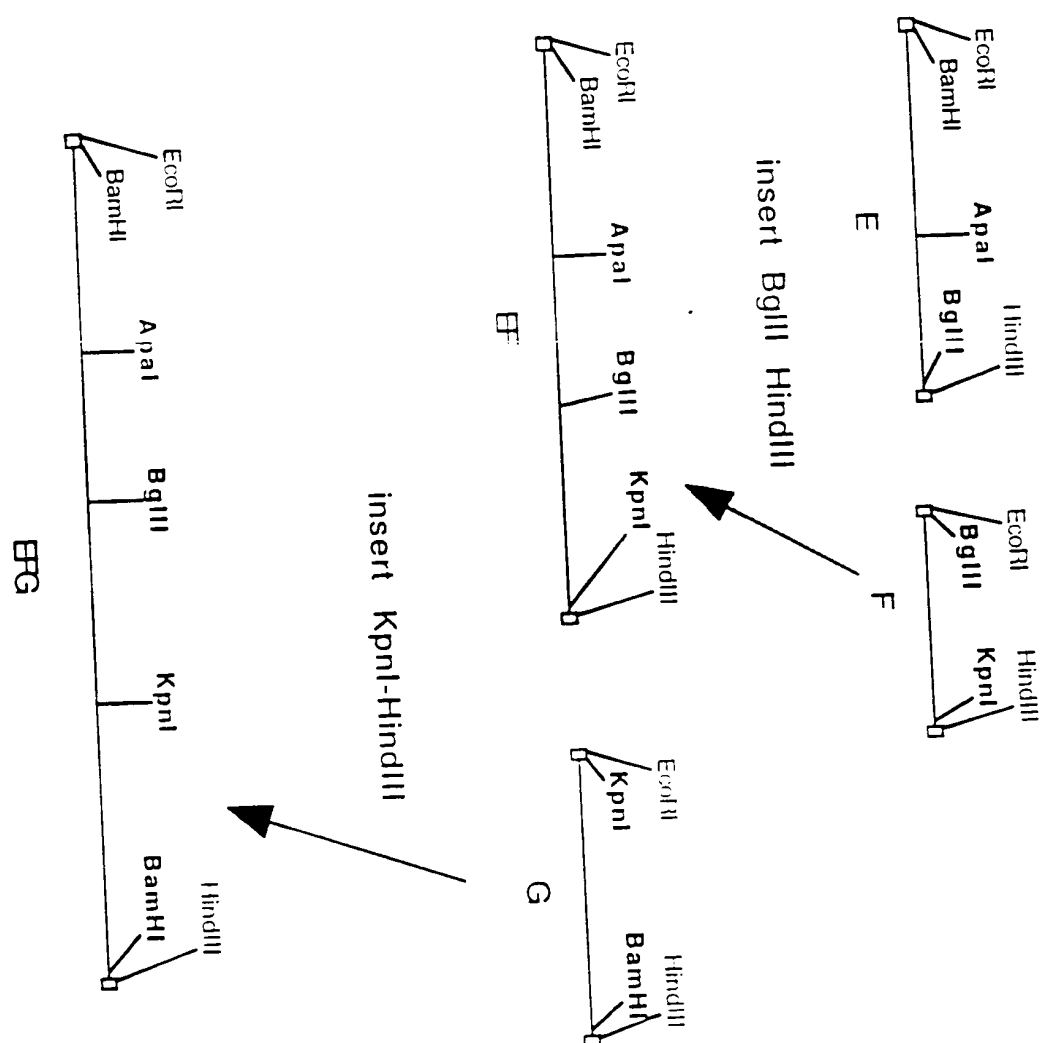


FIG. 6 (2 of 5)

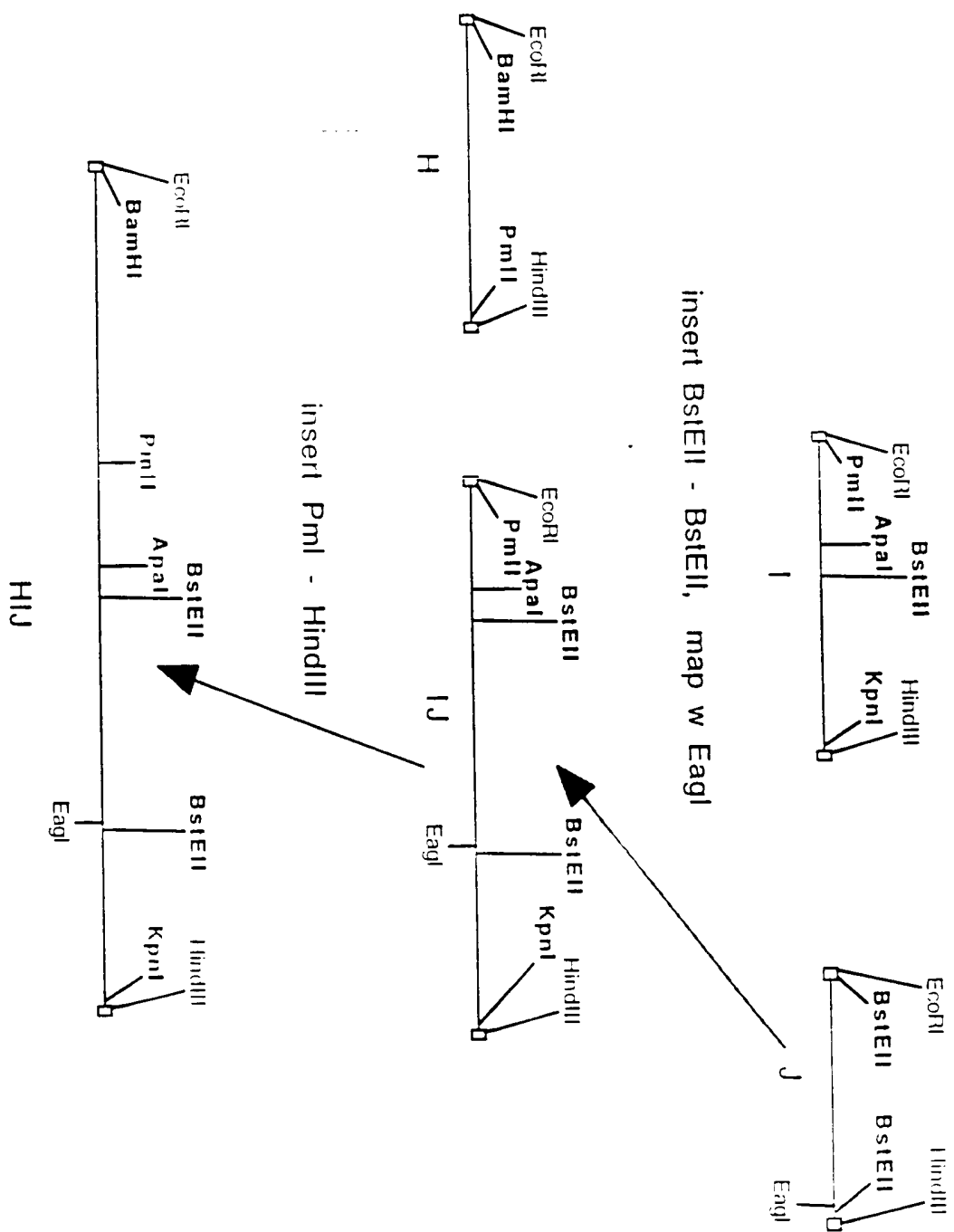


FIG. 6 (3 of 5)

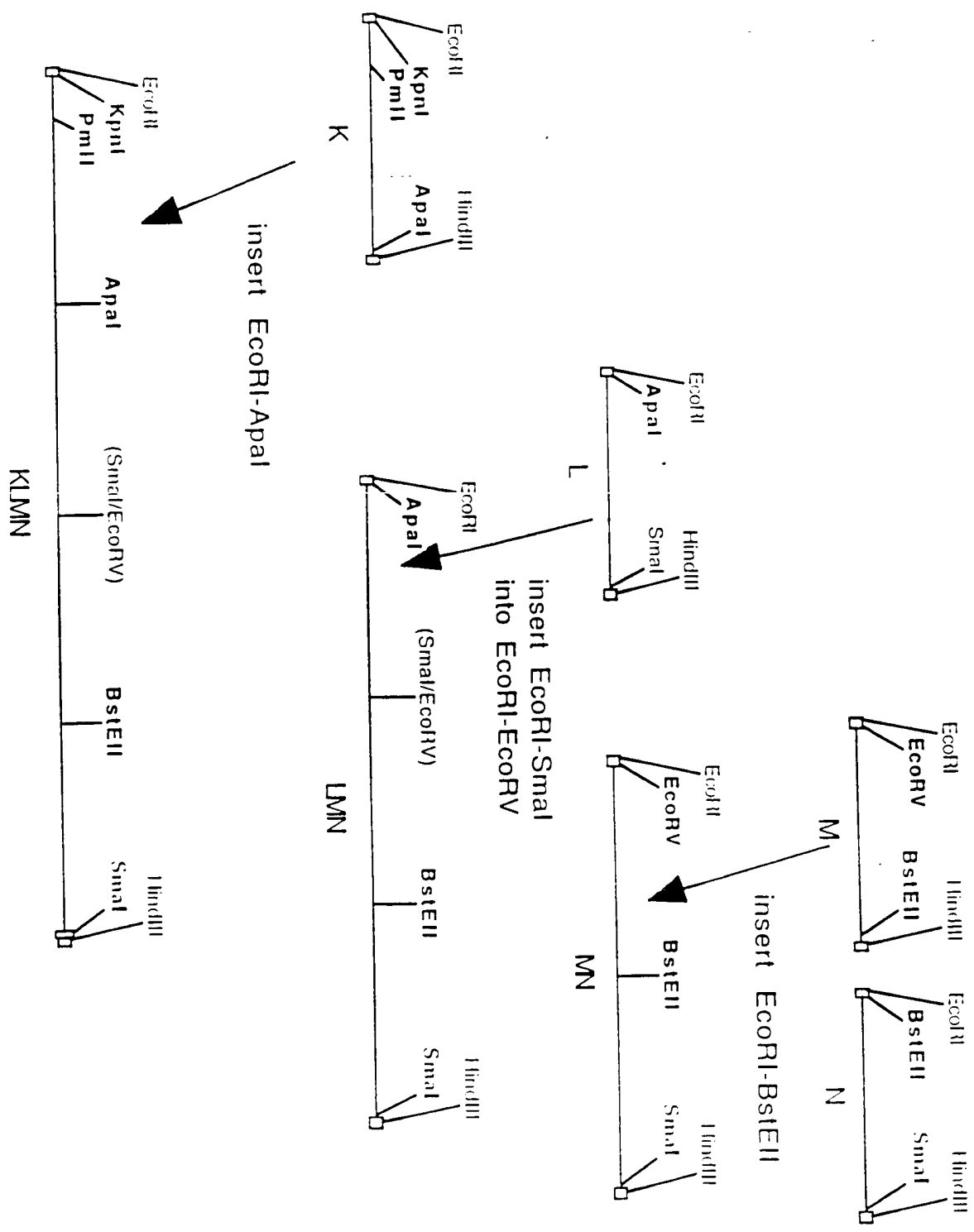


FIG. 6 (4 of 5)

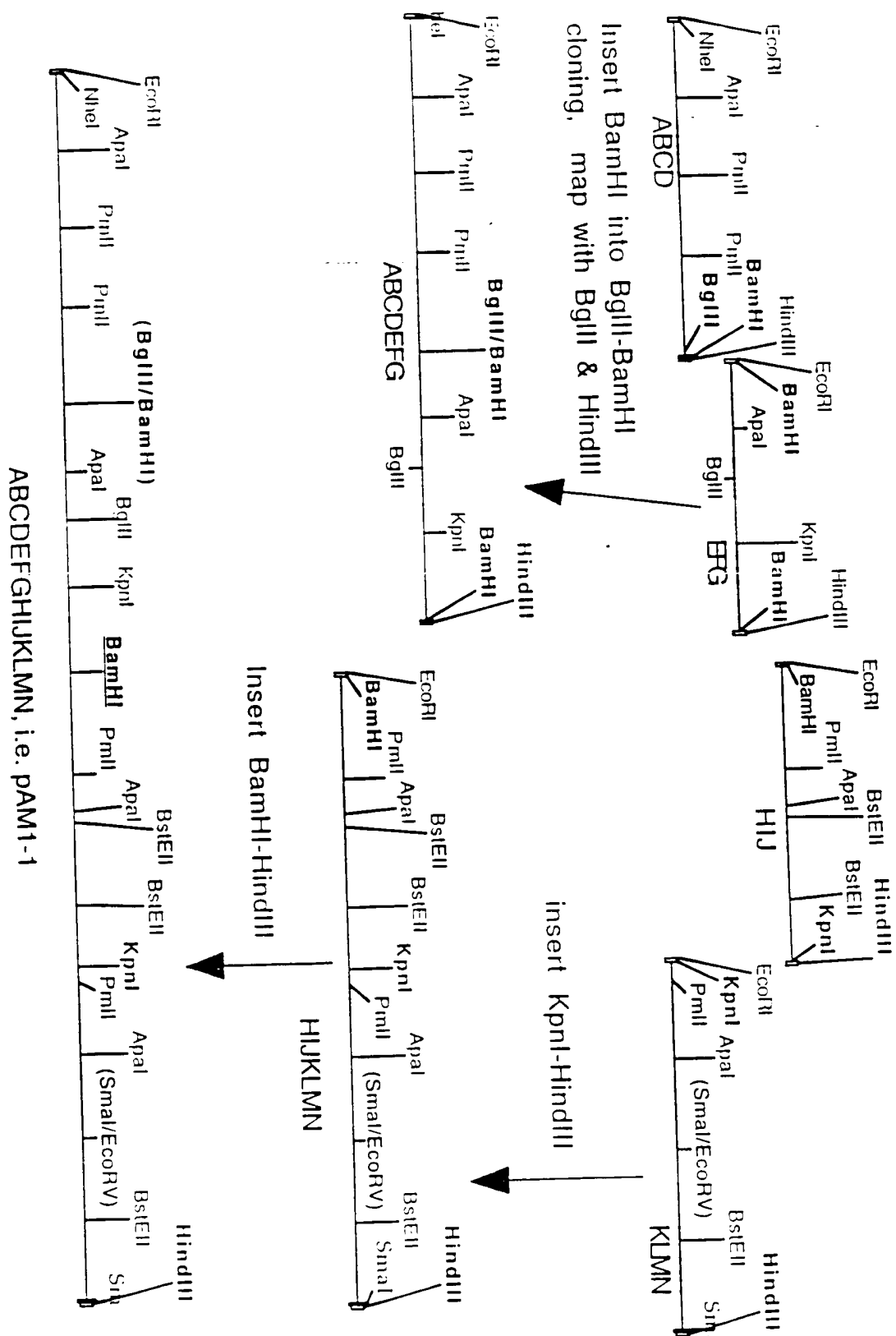


FIG. 6 (5 of 5)

EcoRI NheI

1 TAGAATTCGCTAGGCTAGCATCCAGATCCAGCTCAGCACCTCCTTCTCTCTGTGCTGCTGCGCTTCTGCTTC

1 MetGlnIleGluLeuSerThrCysPhePheLeuCysLeuLeuArgPheCysPhe

73 AGCGCCACCCGCCGCTACTACCTGGCGCCCGCTGGAGCTCAGCTGGGACTACATGCAGAGCGACCTGGGCGAG

19 SerAlaThrArgArgTyrTyrLeuGlyAlaValGluLeuSerTrpAspTyrMetGlnSerAspLeuGlyGlu

145 CTGCCCCGTGGACGCCCCGCTTCCCCCCCCCGCTGCCCAAGAGCTTCCCCCTCAACACCAGCGTGGTGTACAAG

43 LeuProValAspAlaArgPheProProArgValProLysSerPheProPheAsnThrSerValValTyrLys

217 AAGACCCTGTTTCGTGGAGTTCACCGACCACCTGTTCAACATCGCCCAAGCCCCGCCCCCCTGGATGGGCGCTG

67 LysThrLeuPheValGluPheThrAspHisLeuPheAsnIleAlaLysProArgProProTrpMetGlyLeu

Apal MscI

289 CTGGGCCCCCACCATCCAGGCCGAGGTGTACGACACCGTGGTGATCACCCCTGAAGAACATGGCCAGCCACCCC

91 LeuGlyProThrIleGlnAlaGluValTyrAspThrValValIleThrLeuLysAsnMetAlaSerHisPro

361 GTGAGCCTGCACGCCGTGGGCGTGAGCTACTGGAAGGCCAGCGAGGGCGCCGAGTACGACGACCAGACCAGC

115 ValSerLeuHisAlaValGlyValSerTyrTrpLysAlaSerGluGlyAlaGluTyrAspAspGlnThrSer

433 CAGCGCGAGAAGGAGGACGACAAGGTGTTCCCCGGCGGCAGCCACACCTACGTGTGGCAGGTGCTGAAGGAG

139 GlnArgGluLysGluAspAspLysValPheProGlyGlySerHisThrTyrValTrpGlnValLeuLysGlu

MscI PmlI

505 AACGGCCCCATGGCCAGCGACCCCCCTGTGCCTGACCTACAGCTACCTGAGCCACGTGGACCTEGTGAAGGAC

163 AsnGlyProMetAlaSerAspProLeuCysLeuThrTyrSerTyrLeuSerHisValAspLeuValLysAsp

MscI

577 CTGAACAGCGGCCCTGATCGGCGCCCTGCTGGTGTGCCGCGAGGGCAGCCTGGCCAAGGAGAAGACCCAGACC

187 LeuAsnSerGlyLeuIleGlyAlaLeuLeuValCysArgGluGlySerLeuAlaLysGluLysThrGlnThr

649 CTGCACAAGTTCATCCTGCTGTTTCGCCGTGTTTCGACGAGGGCAAGAGCTGGCACAGCGAGACCAAGAACAGC

211 LeuHisLysPheIleLeuLeuPheAlaValPheAspGluGlyLysSerTrpHisSerGluThrLysAsnSer

721 CTGATGCAGGACCGCGACGCCGCCAGCGCCCGCGCCTGGCCCAAGATGCACACCGTGAACGGCTACGTGAAC

235 LeuMetGlnAspArgAspAlaAlaSerAlaArgAlaTrpProLysMetHisThrValAsnGlyTyrValAsn

PmlI

793 CGCAGCCTGCCCCGGCCTGATCGGCTGCCACCGCAAGAGCGTGTACTGGCACGTGATCGGCATGGGCACCACC

259 ArgSerLeuProGlyLeuIleGlyCysHisArgLysSerValTyrTrpHisValIleGlyMetGlyThrThr

865 CCCCAGGTGCACAGCATCTTCTGAGGGGCCACACCTTCTGGTGGCGCAACCAACCGCCAGGCCAGCCTGGAG

283 ProGluValHisSerIlePheLeuGluGlyHisThrPheLeuValArgAsnHisArgGlnAlaSerLeuGlu

937 ATCAGCCCCATCACCTTCTGACCGCCCCAGACCCTGCTGATGGACCTGGGCCAGTTCCTGCTGTTCTGCCAC

307 IleSerProIleThrPheLeuThrAlaGlnThrLeuLeuMetAspLeuGlyGlnPheLeuLeuPheCysHis

1009 ATCAGCAGCCACCAGCAGCAGGCATGGAGGCCTACGTGAAGGTGGACAGCTGCCCCGAGGAGCCCCAGCTG

331 IleSerSerHisGlnHisAspGlyMetGluAlaTyrValLysValAspSerCysProGluGluProGlnLeu

1081 CGCATGAAGAACAACGAGGAGGCCGAGGACTACGACGACGACCTGACCGACAGCGAGATGGACGTGGTGGCG

355 ArgMetLysAsnAsnGluGluAlaGluAspTyrAspAspAspLeuThrAspSerGluMetAspValValArg

(BglII/BamHI)

1153 TTCGACGACGACAACAGCCCCAGCTTCATCCAGATCCCGACGCTGGCCAAGAAGCACCCCCAAGACCTGGGTG

379 PheAspAspAspAsnSerProSerPheIleGlnIleArgSerValAlaLysLysHisProLysThrTrpVal

1225 CACTACATCGCCGCGGAGGAGGAGGACTCGGACTACGCCCCCCTGGTGGCTGGCCCCGACGACCGCAGCTAC

403 HisTyrIleAlaAlaGluGluGluAspTrpAspTyrAlaProLeuValLeuAlaProAspAspArgSerTyr

EagI

1297 AAGAGCCAGTACCTGAACAACGGCCCCCAGCGCATCGGCCGCAAGTACAAGAAGGTGCGCTTCATGGCCTAC

427 LysSerGlnTyrLeuAsnAsnGlyProGlnArgIleGlyArgLysTyrLysLysValArgPheMetAlaTyr

Apal

1369 ACCGACGAGACCTTCAAGACCTGGGAGGCCATCCAGCACGAGAGCGGCATCCTGGGCCCCCTGCTGTACGGC

451 ThrAspGluThrPheLysThrArgGluAlaIleGlnHisGluSerGlyIleLeuGlyProLeuLeuTyrGly

1441 CAGGTGGGCGACACCCCTGCTGATCATCTTCAAGAACCAGGGCCAGCCGCCCCCTACAACATCTACCCCCACGGC
 475▶ GluValGlyAspThrLeuLeuIleIlePheLysAsnGlnAlaSerArgProTyrAsnIleTyrProHisGly
 1513 ATCACCAGCGTGGGCCCCCTGTACAGCCCGCCCTGCCCAAGGGCGTGAAGCACCTGAAGGACTTCCCCATC
 499▶ IleThrAspValArgProLeuTyrSerArgArgLeuProLysGlyValLysHisLeuLysAspPheProIle

BglII

1585 CTGCCCCGGCGAGATCTTCAAGTACAAGTGGACCGTGGACCGTGGAGGACGGCCCCACCAAGAGCGACCCCGCG
 523▶ LeuProGlyGluIlePheLysTyrLysTrpThrValThrValGluAspGlyProThrLysSerAspProArg
 1657 TGCCTGACCCGCTACTACAGCAGCTTCGTGAACATGGAGCGCGACCTGGCCAGCGGCCTGATCGGCCCCCTG
 547▶ CysLeuThrArgTyrTyrSerSerPheValAsnMetGluArgAspLeuAlaSerGlyLeuIleGlyProLeu
 1729 CTGATCTGCTACAAGGAGAGCGTGGACCGCGCGCAACCAGATCATGAGCGACAAGCGCAACGTGATCCTG
 571▶ LeuIleCysTyrLysGluSerValAspGlnArgGlyAsnGlnIleMetSerAspLysArgAsnValIleLeu

KpnI

1801 TTCAGCGTGTTCGACGAGAACCAGCGCTGGTACCTGACCGAGAACATCCAGCGCTTCCTGCCCAACCCCGCC
 595▶ PheSerValPheAspGluAsnArgSerTrpTyrLeuThrGluAsnIleGlnArgPheLeuProAsnProAla
 1873 GGCGTGCAGCTGGAGGACCCGAGTTCAGGCCAGCAACATCATGCACAGCATCAACGGCTACGTGTTTCGAC
 619▶ GlyValGlnLeuGluAspProGluPheGlnAlaSerAsnIleMetHisSerIleAsnGlyTyrValPheAsp
 1945 AGCCTGCAGCTGAGCGTGTGCCTGCACGAGGTGGCCTACTGGTACATCCTGAGCATCGGCGCCCGAGCCGAC
 643▶ SerLeuGlnLeuSerValCysLeuHisGluValAlaTyrTrpTyrIleLeuSerIleGlyAlaGlnThrAsp
 2017 TTCCTGAGCGTGTTCCTCAGCGGCTACACCTTCAAGCACAAGATGGTGTACGAGGACACCCTGACCCTGTTC
 667▶ PheLeuSerValPhePheSerGlyTyrThrPheLysHisLysMetValTyrGluAspThrLeuThrLeuPhe

BamHI

2089 CCCTTCAGCGGCGAGACCGTGTTCATGAGCATGGAGAACCCCGGCCTGTGGATCCTGGGCTGCCACAACAGC
 691▶ ProPheSerGlyGluThrValPheMetSerMetGluAsnProGlyLeuTrpIleLeuGlyCysHisAsnSer
 2161 GACTTCCGCAACCCGCGCATGACCGCCCTGCTGAAGGTGAGCAGCTGCGACAAGAACACCCGCGACTACTAC
 715▶ AspPheArgAsnArgGlyMetThrAlaLeuLeuLysValSerSerCysAspLysAsnThrGlyAspTyrTyr
 2233 GAGGACAGCTACGAGGACATCAGCGCCTACCTGCTGAGCAAGAACAACGCCATCGAGCCCCGCTCGGAGGAG
 739▶ GluAspSerTyrGluAspIleSerAlaTyrLeuLeuSerLysAsnAsnAlaIleGluProArgLeuGluGlu

BstXI

2305 ATCACC CGCACCACCCCTGCAGAGCGACCAGGAGGAGATCGACTACGACGACACCATCAGCGTGGAGATGAAG
 763▶ IleThrArgThrThrLeuGlnSerAspGlnGluGluIleAspTyrAspAspThrIleSerValGluMetLys
 2377 AAGGAGGACTTCGACATCTACGACGAGGACGAGAACCAGAGCCCCCGCAGCTTCCAGAAGAAGACCCGCCAC
 787▶ LysGluAspPheAspIleTyrAspGluAspGluAsnGlnSerProArgSerPheGlnLysLysThrArgHis

PmlI

2449 TACTTCATCGCCCGCGTGGAGCGCCTGTGGGACTACGGCATGAGCAGCAGCCCCCAGCTGCTGCGCAACCGC
 811▶ TyrPheIleAlaAlaValGluArgLeuTrpAspTyrGlyMetSerSerSerProHisValLeuArgAsnArg
 2521 GCCCAGAGCGGCAGCGTGCCCCAGTTCAAGAAGGTGGTGTTCAGGAGTTCACCGACGGCAGCTTCACCCAG
 835▶ AlaGlnSerGlySerValProGlnPheLysLysValValPheGlnGluPheThrAspGlySerPheThrGln

Apal

2593 CCCCCTGTACCGCGCGGAGCTGAACGAGCACCTGGGCCTGCTGGGCCCCCTACATCCGCGCCGAGGTGGAGGAC
 859▶ ProLeuTyrArgGlyGluLeuAsnGluHisLeuGlyLeuLeuGlyProTyrIleArgAlaGluValGluAsp

BstEII

2665 AACATCATGGTGACCTTCCGCAACCAGGCCAGCCGCCCCCTACAGCTTCTACAGCAGCCTGATCAGCTACGAG
 883▶ AsnIleMetValThrPheArgAsnGlnAlaSerArgProTyrSerPheTyrSerSerLeuIleSerTyrGlu
 2737 GAGGACCGAGCGCCAGGGCGCCGAGCCCCGCAAGAAGTTCGTGAAGCCCGACGAGACCAAGACCTACTTCTGG
 907▶ GluAspGlnArgGlnGlyAlaGluProArgLysAsnPheValLysProAsnGluThrLysThrTyrPheTrp
 2809 AAGGTGCAGCACCACATGCCCCCACCAGGACGAGTTCGACTGCAAGGCCTGGGCCTACTTCAGCGACGTC

1381 TACCTCGAGAAGGACGTGCACAGCGGCGCTGATCGGGCCCCCTGCTGGTGTGCCACACCAACACCCTGAACCCC
 955▶ AspLeuGluLysAspValHisSerGlyLeuIleGlyProLeuLeuValCysHisThrAsnThrLeuAsnPro
 EagI BstEII
 1953 CCCCACGGCGCCAGGTGACCGTGCAGGAGTTCGGCCCTGTTCTTCACCATCTTCGACGAGACCAAGAGCTGG
 979▶ AlaHisGlyArgGlnValThrValGlnGluPheAlaLeuPhePheThrIlePheAspGluThrLysSerTrp
 3025 TACTTCACCGAGAACATGGAGCGCAACTGCCGCGCCCTGCAACATCCAGATGGAGGACCCCACTTCAAG
 1003▶ TyrPheThrGluAsnMetGluArgAsnCysArgAlaProCysAsnIleGlnMetGluAspProThrPheLys
 3097 GAGAACTACCGCTTCCACGCCATCAACGGCTACATCATGGACACCCTGCCCGGCTGGTGATGGCCCAGGAC
 1027▶ GluAsnTyrArgPheHisAlaIleAsnGlyTyrIleMetAspThrLeuProGlyLeuValMetAlaGlnAsp
 KpnI PmlI
 3169 CAGCGCATCCGCTGGTACCTGCTGAGCATGGGCAGCAACGAGAACATCCACAGCATCCACTTCAGCGGCCAC
 1051▶ GlnArgIleArgTrpTyrLeuLeuSerMetGlySerAsnGluAsnIleHisSerIleHisPheSerGlyHis
 3241 GTGTTACCGTGGCGAAGAAGGAGGAGTACAAGATGGCCCTGTACAACCTGTACCCCGGCGTGTTCGAGACC
 1075▶ ValPheThrValArgLysLysGluGluTyrLysMetAlaLeuTyrAsnLeuTyrProGlyValPheGluThr
 3313 GTGGAGATGCTGCCCAGCAAGGCCCGGCATCTGGCGCGTGGAGTGCCTGATCGGCGAGCACCTGCACGCCGGC
 1099▶ ValGluMetLeuProSerLysAlaGlyIleTrpArgValGluCysLeuIleGlyGluHisLeuHisAlaGly
 3385 ATGAGCACCCCTGTTCTCTGCTGTACAGCAACAAGTGCAGACCCCCCTGGGCATGGCCAGCGGCCACATCCGC
 1123▶ MetSerThrLeuPheLeuValTyrSerAsnLysCysGlnThrProLeuGlyMetAlaSerGlyHisIleArg
 ApaI
 3457 GACTTCCAGATCACCGCCAGCGGCCAGTACGGCCAGTGGGCCCCCAAGCTGGCCCGCTGCACTACAGCGGC
 1147▶ AspPheGlnIleThrAlaSerGlyGlnTyrGlyGlnTrpAlaProLysLeuAlaArgLeuHisTyrSerGly
 3529 AGCATCAACGCCTGGAGCACCAAGGAGCCCTTCAGCTGGATCAAGGTGGACCTGCTGGCCCCCATGATCATC
 1171▶ SerIleAsnAlaTrpSerThrLysGluProPheSerTrpIleLysValAspLeuLeuAlaProMetIleIle
 3601 CACGGCATCAAGACCCAGGGCGCCCGCCAGAAGTTCAGCAGCCTGTACATCAGCCAGTTCATCATCATGTAC
 1195▶ HisGlyIleLysThrGlnGlyAlaArgGlnLysPheSerSerLeuTyrIleSerGlnPheIleIleMetTyr
 3673 AGCCTGGACGGCAAGAAGTGGCAGACCTACCGCGGCAACAGCACCGGCACCCTGATGGTGTCTCTCGGCAAC
 1219▶ SerLeuAspGlyLysLysTrpGlnThrTyrArgGlyAsnSerThrGlyThrLeuMetValPhePheGlyAsn
 (SmaI/EcoRV)
 3745 GTGGACAGCAGCGGCATCAAGCACAACATCTTCAACCCCCCATCATCGCCCCCTACATCCGCTGCACCCC
 1243▶ ValAspSerSerGlyIleLysHisAsnIlePheAsnProProIleIleAlaArgTyrIleArgLeuHisPro
 3817 ACCCACTACAGCATCCCGACGACCCCTGCGCATGGAGCTGATGGGCTGCGACCTGAACAGCTGCAGCATGCCC
 1267▶ ThrHisTyrSerIleArgSerThrLeuArgMetGluLeuMetGlyCysAspLeuAsnSerCysSerMetPro
 3889 CTGGGCATGGAGAGCAAGGCCATCAGCGACGCCCAGATCACCGCCAGCAGCTACTTCAACCAACATGTTCCGCC
 1291▶ LeuGlyMetGluSerLysAlaIleSerAspAlaGlnIleThrAlaSerSerTyrPheThrAsnMetPheAla
 3961 ACCTGGAGCCCCAGCAAGGCCCGCTGCACCTGCAGGGCCGAGCAACGCCTGGCGCCCCCAGGTGAACAAC
 1315▶ ThrTrpSerProSerLysAlaArgLeuHisLeuGlnGlyArgSerAsnAlaTrpArgProGlnValAsnAsn
 BstEII
 4033 CCCAAGGAGTGGCTGCAGGTGGACTTCCAGAAGACCATGAAGGTGACCGCGCTGACCACCCAGGGCGTGAAG
 1339▶ ProLysGluTrpLeuGlnValAspPheGlnLysThrMetLysValThrGlyValThrThrGlnGlyValLys
 4105 AGCCTGCTGACCAGCATGTACGTGAAGGAGTTCCTGATCAGCAGCAGCCAGGACCGCCACCACTGGACCCCTG
 1363▶ SerLeuLeuThrSerMetTyrValLysGluPheLeuIleSerSerSerGlnAspGlyHisGlnTrpThrLeu
 4177 TTCTTCCAGAACCGGAAGGTGAAGGTGTTCCAGGGCAACCAGGACAGCTTCACCCCCCTGGTGAACAGCCCTG
 1387▶ PhePheGlnAsnGlyLysValLysValPheGlnGlyAsnGlnAspSerPheThrProValValAsnSerLeu
 4249 GACCCCCCCTGCTGACCCGCTACCTGCGCATCCACCCCCAGAGCTGGGTGCACAGATCGCCCTGCGCATG
 1411▶ AspProProLeuLeuThrArgTyrLeuArgIleHisProGlnSerTrpValHisGlnIleAlaLeuArgMet
 SmaI HindIII

AM18F1

AM18R4

AM8F-R2

AM18BR2

Bst XI

Hindi

AM8P1

FIG. 8

EcoRI NheI
 1 TAGAATTCCTAGGCTAGCATGCAGATCGAGCTCAGCACCTGCTTCTTCTCTGTGCCTGCTCGGCTTCTGCTTC
 1 MetGlnIleGluLeuSerThrCysPhePheLeuCysLeuLeuArgPheCysPhe
 73 AGCGCCACCCGCGCGCTACTACCTGGGCGCCCTGGAGCTCAGCTGGGACTACATGCAGAGCGACCTGGGCGAG
 19 SerAlaThrArgArgTyrTyrLeuGlyAlaValGluLeuSerTrpAspTyrMetGlnSerAspLeuGlyGlu
 145 CTGCCCCGTGGACGCCCCGCTTCCCCCCCCCGCGCTGCCCAAGAGCTTCCCCCTCAACACCAGCGTGGTGTACAAG
 43 LeuProValAspAlaArgPheProProArgValProLysSerPheProPheAsnThrSerValValTyrLys
 117 AAGACCCTGTTTCGTGGAGTTCACCGACCACCTGTTCAACATCGCCCAAGCCCCGCCCCCCTGGATGGGCGCTG
 67 LysThrLeuPheValGluPheThrAspHisLeuPheAsnIleAlaLysProArgProProTrpMetGlyLeu
 Apal MscI
 289 CTGGGCCCCACCATCCAGGCGGAGGTGTACGACACCGTGGTGATCACCCCTGAAGAACATGGCCAGCCACCCC
 91 LeuGlyProThrIleGlnAlaGluValTyrAspThrValValIleThrLeuLysAsnMetAlaSerHisPro
 361 GTGAGCCTGCACGCCGTGGGCGTGAGCTACTGGAAGGCCAGCGAGGGCGCCGAGTACGACGACCAGACCAGC
 115 ValSerLeuHisAlaValGlyValSerTyrTrpLysAlaSerGluGlyAlaGluTyrAspAspGlnThrSer
 433 CAGCGCGAGAAGGAGGACGACAAGGTGTTCCCCGGCGGCAGCCACACCTACGTGTGGCAGGTGCTGAAGGAG
 139 GlnArgGluLysGluAspAspLysValPheProGlyGlySerHisThrTyrValTrpGlnValLeuLysGlu
 MscI PmlI
 505 AACGGCCCCATCGCCAGCGACCCCTGTGCCTGACCTACAGCTACCTGAGCCACGTGGACCTGCTGAAGGAC
 163 AsnGlyProMetAlaSerAspProLeuCysLeuThrTyrSerTyrLeuSerHisValAspLeuValLysAsp
 MscI
 577 CTGAACAGCGGCCTGATCGGCGCCCTGCTGGTGTGCCGCGAGGGCAGCCTGGCCAAGGAGAAGACCCAGACC
 187 LeuAsnSerGlyLeuIleGlyAlaLeuLeuValCysArgGluGlySerLeuAlaLysGluLysThrGlnThr
 649 CTGCACAAGTTCATCTCTGCTGTTTCGCCGTGTTTCGACGAGGGCAAGAGCTGGCACAGCGAGACCAAGAACAGC
 211 LeuHisLysPheIleLeuLeuPheAlaValPheAspGluGlyLysSerTrpHisSerGluThrLysAsnSer
 721 CTGATGCAGGACCGCGACGCGCGCCAGCGCCCCGCGCTGGCCCCAAGATGCACACCGTGAACGGCTACGTGAAC
 235 LeuMetGlnAspArgAspAlaAlaSerAlaArgAlaTrpProLysMetHisThrValAsnGlyTyrValAsn
 PmlI
 793 CGCAGCCTGCCCCGGCCTGATCGGCTGCCACCGCAAGAGCGTGACTGGCACGTGATCGGCATGGGCACCCACC
 259 ArgSerLeuProGlyLeuIleGlyCysHisArgLysSerValTyrTrpHisValIleGlyMetGlyThrThr
 865 CCGGAGGTGCACAGCATCTTCTCTGGAGGGCCACACCTTCTCTGCTGGCAACCACCGCCAGGCCAGCTGGAG
 283 ProGluValHisSerIlePheLeuGluGlyHisThrPheLeuValArgAsnHisArgGlnAlaSerLeuGlu
 937 ATCAGCCCCATCACCTTCTTGACCGCCCGAGACCTGCTGATGGACCTGGGCCAGTTCCTGCTGTTCTGCCCAC
 307 IleSerProIleThrPheLeuThrAlaGlnThrLeuLeuMetAspLeuGlyGlnPheLeuLeuPheCysHis
 1009 ATCAGCAGCCACCAGCACGACGGGCATGGAGGCCCTACGTGAAGGTGGACAGCTGCCCCGAGGAGCCCCAGCTG
 331 IleSerSerHisGlnHisAspGlyMetGluAlaTyrValLysValAspSerCysProGluGluProGlnLeu
 1081 CGCATGAAGAACAACGAGGAGGCCGAGGACTACGACGACGACCTGACCGACAGCGAGATGGACGTGGTGGCG
 355 ArgMetLysAsnAsnGluGluAlaGluAspTyrAspAspAspLeuThrAspSerGluMetAspValValArg
 (BgIII/BamHI)
 1153 TTCAGCAGCACAACAGCCCCAGCTTCATCCAGATCCGCGACCGTGGCCAAGAAGCACCCCAAGACCTGGGTG
 379 PheAspAspAspAsnSerProSerPheIleGlnIleArgSerValAlaLysLysHisProLysThrTrpVal
 1225 CACTACATCGCCGCGGAGGAGGAGGACTGGGACTACGCCCCCCTGGTGCTGGCCCCCGACGACCCAGCTAC
 403 HisTyrIleAlaAlaGluGluGluAspTrpAspTyrAlaProLeuValLeuAlaProAspAspArgSerTyr
 EagI
 1297 AAGAGCCAGTACCTGAACACAGGCCCCCCAGCGCATCGGCCCAAGTACAAGAAGGTGCGCTTCATGGCCTAC
 427 LysSerGlnTyrLeuAsnAsnGlyProGlnArgIleGlyArgLysTyrLysLysValArgPheMetAlaTyr
 Apal

1441 GAGGTGGGGGACACCCTGCTGATCATCTTCAAGAACCAGGCCAGCCCCCTACAACATCTACCCCCACGGC
 475> GluValGlyAspThrLeuLeuIleIlePheLysAsnGlnAlaSerArgProTyrAsnIleTyrProHisGly
 1513 ATCACCAGCGTGGCCCCCTGTACAGCCGCGCCTGCCCAAGGGCGTGAAGCACCTGAAGGACTTCCCCATC
 499> IleThrAspValArgProLeuTyrSerArgArgLeuProLysGlyValLysHisLeuLysAspPheProIle

BglII

1585 CTGCCCCGGCGAGATCTTCAAGTACAAGTGGACCCTGACCCTGGAGGACGGCCCCACCAAGAGCGACCCCCGC
 523> LeuProGlyGluIlePheLysTyrLysTrpThrValThrValGluAspGlyProThrLysSerAspProArg
 1657 TGCCTGACCCGCTACTACAGCAGCTTCGTGAACATGGAGCGCGACCTGGCCAGCGGCTGATCGGCCCCCTG
 547> CysLeuThrArgTyrTyrSerSerPheValAsnMetGluArgAspLeuAlaSerGlyLeuIleGlyProLeu
 1729 CTGATCTGCTACAAGGAGAGCGTGGACCAGCGCGGCAACCAGATCATGAGCGACAAGCGCAACGTGATCCTG
 571> LeuIleCysTyrLysGluSerValAspGlnArgGlyAsnGlnIleMetSerAspLysArgAsnValIleLeu

KpnI

1801 TTCAGCGTGTTCGACGAGAACCAGCTCGTACCTGACCCAGAACATCCAGCGCTTCCTGCCCAACCCCGCC
 595> PheSerValPheAspGluAsnArgSerTrpTyrLeuThrGluAsnIleGlnArgPheLeuProAsnProAla
 1873 GCGGTGCAGCTGGAGGACCCCGAGTTCCAGGCCAGCAACATCATGCACAGCATCAACGGCTACGTGTTGAC
 619> GlyValGlnLeuGluAspProGluPheGlnAlaSerAsnIleMetHisSerIleAspGlyTyrValPheAsp
 1945 ACCCTCCAGCTGAGCGTGTGCTGACAGGTTGGCCTACTGGTACATCCTGAGCATCGGCGCCAGACCGAC
 643> SerLeuGlnLeuSerValCysLeuHisGluValAlaTyrTrpTyrIleLeuSerIleGlyAlaGlnThrAsp
 2017 TTCCTGAGCGTGTTCCTCAGCGCTACACCTTCAAGCACAAGATGGTGTACGAGGACACCCTGACCCTGTTC
 667> PheLeuSerValPhePheSerGlyTyrThrPheLysHisLysMetValTyrGluAspThrLeuThrLeuPhe

BamHI

2089 CCCTTCAGCGGCGAGACCGTGTTCATGAGCATGGAGAACCCCGGCCTGTGGATCCTGGGCTGCCACAACAGC
 691> ProPheSerGlyGluThrValPheMetSerMetGluAsnProGlyLeuTrpIleLeuGlyCysHisAsnSer
 2161 GACTTCCGCAACCGCGGCATGACCGCCCTGCTGAAGGTGAGCAGCTGCGACAAGAACACCGGCGACTACTAC
 715> AspPheArgAsnArgGlyMetThrAlaLeuLeuLysValSerSerCysAspLysAsnThrGlyAspTyrTyr
 2233 GAGGACAGCTACGAGGACATCAGCGCCTACCTGCTGAGCAAGAACAACGCCATCGAGCCCCGAGGCGCAGG
 739> GluAspSerTyrGluAspIleSerAlaTyrLeuLeuSerLysAsnAsnAlaIleGluProArgArgArgArg

BstXI

2305 GCGGAGATCACC CGCACCACCTGCAGAGCGACCCAGGAGGAGATCGACTACGACGACACCATCAGCGTGGAG
 763> ArgGluIleThrArgThrThrLeuGlnSerAspGlnGluGluIleAspTyrAspAspThrIleSerValGlu
 2377 ATGAAGAAGGAGGAGCTTCGACATCTACGACGAGGACGAGAACCAGAGCCCCCGAGCTTCCAGAAGAAGACC
 787> MetLysLysGluAspPheAspIleTyrAspGluAspGluAsnGlnSerProArgSerPheGlnLysLysThr

PmlI

2449 CGCCACTACTTCATCGCGCCGCTGGAGCGCCTGTGGGACTACGGCATGAGCAGCAGCCCCCACGTGCTGCGC
 811> ArgHisTyrPheIleAlaAlaValGluArgLeuTrpAspTyrGlyMetSerSerSerProHisValLeuArg
 2521 AACCGCGCCCAGAGCGGCAGCGTGGCCCAAGTTCAAGAAGGTGGTGTCCAGGAGTTCACCGACGGCAGCTTC
 835> AsnArgAlaGlnSerGlySerValProGlnPheLysLysValValPheGlnGluPheThrAspGlySerPhe

Apal

2593 ACCCAGCCCCCTGTACCGCGCGGAGCTGAACGAGCACCTGGGCTCTGGGCCCCCTACATCCCGCGCCGAGGTG
 859> ThrGlnProLeuTyrArgGlyGluLeuAsnGluHisLeuGlyLeuLeuGlyProTyrIleArgAlaGluVal

BstEII

2665 CAGGACAACATCATGGTGACCTTCCGCAACCAGGCCAGCCGCCCTACAGCTTCTACAGCAGCCTGATCAGC
 883> GluAspAsnIleMetValThrPheArgAsnGlnAlaSerArgProTyrSerPheTyrSerSerLeuIleSer
 2737 TACGAGGAGGACCGCGCCAGGGCGCGGAGCCCCGCAAGAAGTTCGTGAAGCCCCACGAGACCCAGACCTAC
 907> TyrGluGluAspGlnArgGlnGlyAlaGluProArgLysAsnPheValLysProAsnGluThrLysThrTyr

2381 TACGTGGACCTGGAGAAGGACGTGCACAGCGGCCTGATCGGCCCCCTGCTGGTGTGCCACACCAACACCCTG
 955▶ AspValAspLeuGluLysAspValHisSerGlyLeuIleGlyProLeuLeuValCysHisThrAsnThrLeu
 EagI BstEII
 2953 AACCCCGCCCCACGGCCGCCAGGTGACCGTGCAGGAGTTCCGCCCTGTTCTTCACCATCTTCGACGAGACCAAG
 979▶ AsnProAlaHisGlyArgGlnValThrValGlnGluPheAlaLeuPhePheThrIlePheAspGluThrLys
 3025 AGCTGGTACTTCACCGAGAACATGGAGCGCAACTGCCGCGCCCCCTGCAACATCCAGATGGAGGACCCACCC
 1003▶ SerTrpTyrPheThrGluAsnMetGluArgAsnCysArgAlaProCysAsnIleGlnMetGluAspProThr
 3097 TTCAAGGAGAACTACCGCTTCCACGCCATCAACGGCTACATCATGGACACCCCTGCCCGGCCTGGTGTATGGCC
 1027▶ PheLysGluAsnTyrArgPheHisAlaIleAsnGlyTyrIleMetAspThrLeuProGlyLeuValMetAla
 KpnI
 3169 CAGGACCAGCGCATCCGCTGGTACCTGCTGAGCATGGGCAGCAACGAGAACATCCACAGCATCCACTTCAGC
 1051▶ GlnAspGlnArgIleArgTrpTyrLeuLeuSerMetGlySerAsnGluAsnIleHisSerIleHisPheSer
 PmlI
 3241 GGCCACGTGTTCCACCGTGCAGCAAGAAGGAGGAGTACAAGATGGCCCTGTACAACCTGTACCCCGGCGTGTTC
 1075▶ GlyHisValPheThrValArgLysLysGluGluTyrLysMetAlaLeuTyrAsnLeuTyrProGlyValPhe
 3313 GAGACCGTGGAGATGCTGCCAGCAAGCCCGCATCTGGCGCGTGGAGTGCCTGATCGGCGAGCACCTGCAC
 1099▶ GluThrValGluMetLeuProSerLysAlaGlyIleTrpArgValGluCysLeuIleGlyGluHisLeuHis
 3385 GCGGCGATGAGCACCCCTGTTCTGCTGTACAGCAACAAGTGCACAGCCCCCTGGGATGGCCAGCGGCCAC
 1123▶ AlaGlyMetSerThrLeuPheLeuValTyrSerAsnLysCysGlnThrProLeuGlyMetAlaSerGlyHis
 ApaI
 3457 ATCCGCGACTTCCAGATCACCGCCAGCGGCCAGTACGGCCAGTGGGCCCCCAAGCTGGCCCGCCTGCACTAC
 1147▶ IleArgAspPheGlnIleThrAlaSerGlyGlnTyrGlyGlnTrpAlaProLysLeuAlaArgLeuHisTyr
 3529 AGCGGCAGCATCAACGCCTGGAGCACCAAGGAGCCCTTCAGCTGGATCAAGGTGGACCTGCTGGCCCCCATG
 1171▶ SerGlySerIleAsnAlaTrpSerThrLysGluProPheSerTrpIleLysValAspLeuLeuAlaProMet
 3601 ATCATCCACGGCATCAAGACCCAGGGCGCCCGCCAGAAGTTCAGCAGCCTGTACATCAGCCAGTTCATCATC
 1195▶ IleIleHisGlyIleLysThrGlnGlyAlaArgGlnLysPheSerSerLeuTyrIleSerGlnPheIleIle
 3673 ATGTACAGCCTGGACGGCAAGAAGTGGCAGACCTACCGCGGCAACAGCACCGGCACCCTGATGGTGTCTCTC
 1219▶ MetTyrSerLeuAspGlyLysLysTrpGlnThrTyrArgGlyAsnSerThrGlyThrLeuMetValPhePhe
 (SmaI/EcoRV)
 3745 GGCAACGTGGACAGCAGCGGCATCAAGCACACATCTTCAACCCCCCATCATCGCCCCGTACATCCGCCTG
 1243▶ GlyAsnValAspSerSerGlyIleLysHisAsnIlePheAsnProProIleIleAlaArgTyrIleArgLeu
 3817 CACCCCACTTACAGCATCCGCAGCACCCCTGCGCATGGAGCTGATGGGCTGCGACCTGAACAGCTGCAGC
 1267▶ HisProThrHisTyrSerIleArgSerThrLeuArgMetGluLeuMetGlyCysAspLeuAsnSerCysSer
 3889 ATGCCCCCTGGGCATGGAGAGCAAGGCCATCAGCGACGCCCAGATCACCGCCAGCAGCTACTTCACCAACATG
 1291▶ MetProLeuGlyMetGluSerLysAlaIleSerAspAlaGlnIleThrAlaSerSerTyrPheThrAsnMet
 3961 TTCGCCACCTGGAGCCCCAGCAAGGCCCGCCTGCACCTGCAGGGCCCGCAGCAACGCCTGGCGCCCCCAGGTG
 1315▶ PheAlaThrTrpSerProSerLysAlaArgLeuHisLeuGlnGlyArgSerAsnAlaTrpArgProGlnVal
 BstEII
 4033 AACAAACCCCAAGGAGTGGCTCCAGGTGGACTTCCAGAAGACCATGAAGGTGACCGGCGTGACCACCCAGGGC
 1339▶ AsnAsnProLysGluTrpLeuGlnValAspPheGlnLysThrMetLysValThrGlyValThrThrGlnGly
 4105 GTGAAGAGCCTGCTGACCAGCATGTACGTGAAGGAGTTCTCTGATCAGCAGCAGCCAGGACGSCCACCAGTGG
 1363▶ ValLysSerLeuLeuThrSerMetTyrValLysGluPheLeuIleSerSerSerGlnAspGlyHisGlnTrp
 4177 ACCCTGTTCTTCCAGAACGGCAAGGTGAAGGTGTTCCAGGGCAACCAGGACAGCTTCACCCCGCTGGTGAAC
 1387▶ ThrLeuPhePheGlnAsnGlyLysValLysValPheGlnGlyAsnGlnAspSerPheThrProValValAsn
 4249 AGCCTGGACCCCCCTGCTGACCCGCTACCTGCGCATCCACCCCGAGAGCTGGTGCACCAGATCGCCCTG
 1411▶ SerLeuAspProProLeuLeuThrArgTyrLeuArgIleHisProGlnSerTrpValHisGlnIleAlaLeu
 SmaI HindIII

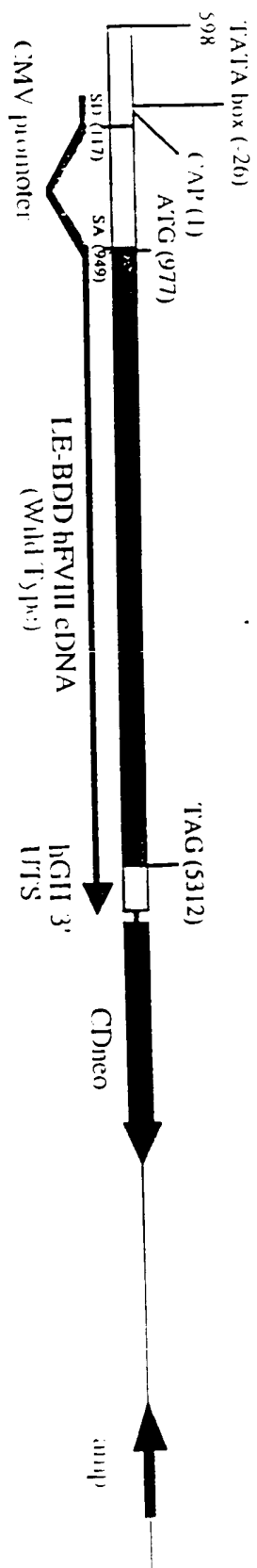


FIG. 10

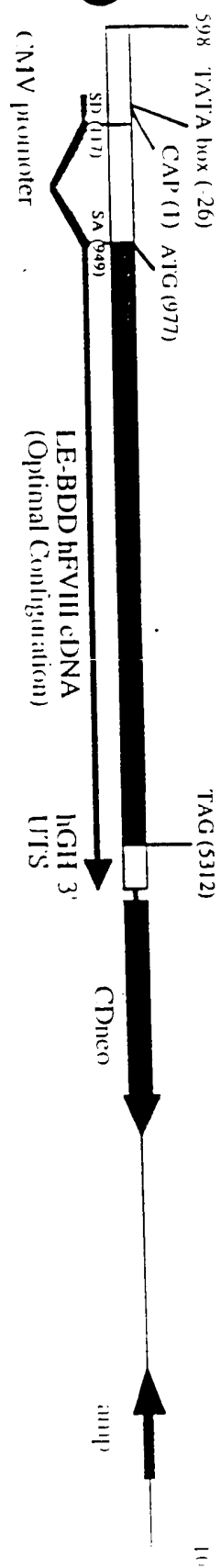


FIG. 11

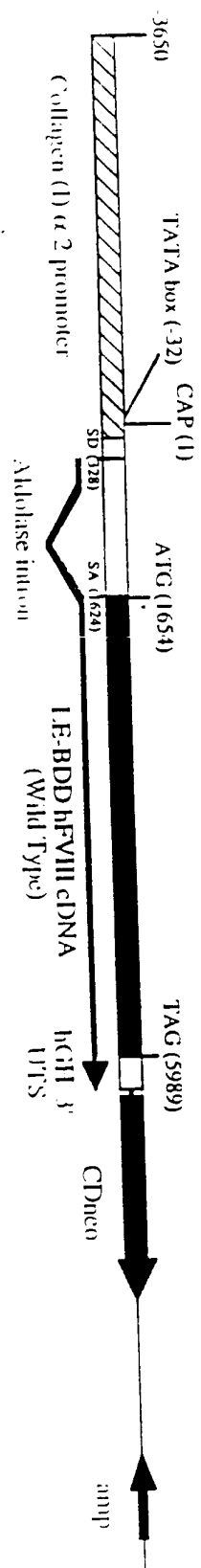


FIG. 12

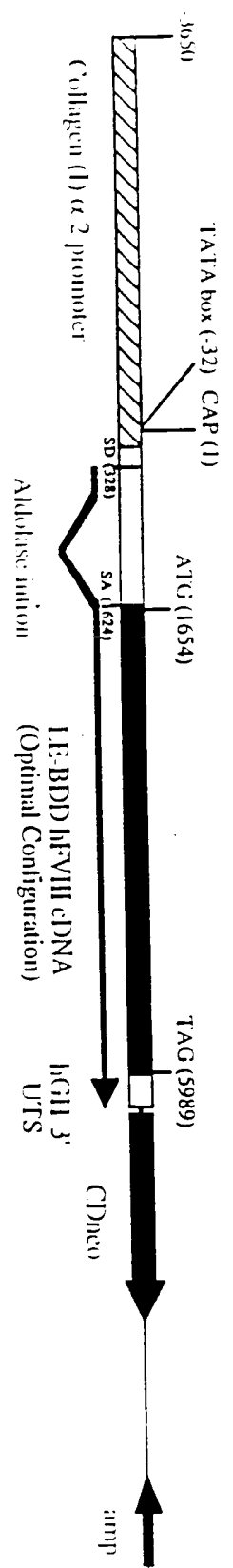


FIG. 13